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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,117	12/04/2003	Rainer Dittrich	22733	7654

535 7590 10/04/2004

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EXAMINER

ANDREWS, MELVYN J

ART UNIT PAPER NUMBER

1742

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,117

Applicant(s)

DITTRICH ET AL.

Examiner

Melvyn J. Andrews

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12403&62104.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: on page 6, line 24, page 7, line 24, page 11, line 21, page 13, line 22 and page 18. misprints occur.

Appropriate correction is required.

Information Disclosure Statement

The information disclosure statement filed June 21, 2003 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. The copies of the publications AS, AT, AU, AW and AX have been submitted but the IDS Form PTO-1449 does not properly identify all the sources or dates of these publications as required, see MPEP 609.

The Foreign Patent Document AI 56134820 has not been considered because a copy has not been apparently filed.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the apparatuses claimed in Claims 9, 10 and 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Why does the drawing include the expression "5-50 mm PIECES" while the specification does not apparently disclose this expression ?

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

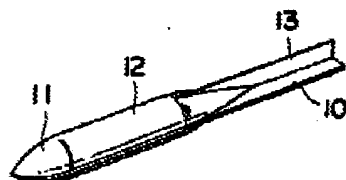
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1742

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nashiwa et al (US 4,043, 798). Nashiwa et al discloses a process for producing steel using a projectile for introducing calcium into molten steel as shown in FIG.4

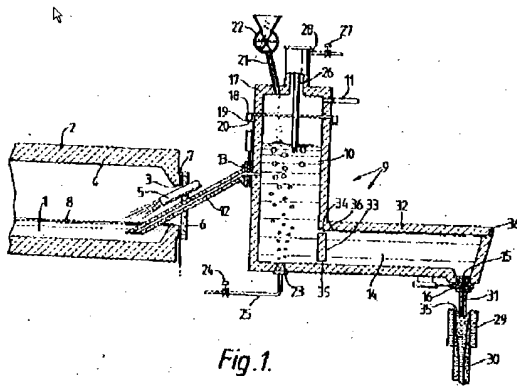
FIG. 4

The projectile has a diameter of 5 to 100mm, preferably 25 to 50 mm which overlaps the claimed feeding pieces with a size 2 to 50 mm (col. 4, lines 23 to col.5, line 54) in view of which the crux of the process as claimed in Claim 1 is regarded as obvious. The

apparatus limitation of Claims 9, 10 and 11 are regarded as obvious since these features are conventional.

Claims 1 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al (US 5,110,351). Hunter et al discloses a method of promoting the decarburization reaction in a vacuum furnace comprising adding manganese ore which is crushed and sized prior to being added to the bath the ore added to the bath being less than 2 inches (50.4 mm) in diameter and the manganese ore is more than 3/8 inches (9.5mm) in diameter which overlaps the claimed range of the feeding pieces which apparently the crux of the claimed process .

Claims 8 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al (US 5,110,351) as applied to claims 1-7 above, and further in view of Sherwood (US 4,51,865). Sherwood discloses a degassing column chamber as shown in Fig.1.



It would have been obvious to one ordinary skill in the art at the time the invention was made to supply the Nashiwa et al manganese ore by the Sherwood means (col. 4, lines 25 to 42).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan Publication Number 01129925). Patent Abstracts of Japan discloses a method for adding calcium to molten steel in granular or lump form (see Abstract) which suggests the crux of the claimed process

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan 55107718 which discloses the production of molten steel comprising molten iron being sucked up to which scale, iron ore is added which suggests the crux of the claimed process .

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bogan et al (US 5,228,902).Bogan et al discloses a method of desulfurization in vacuum processing of steel by adding a desulfurizing agent in lump form which has an average particle size from about ¼ inch to about 3 inches which overlaps the calimed range of the feeding pieces.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is (571)272-1239. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJA
September 29, 2004


MELVYN ANDREWS
PRIMARY EXAMINER